



POCAHONTAS TRAIL CORRIDOR STUDY

Steering Committee Mtg #5

April 19, 2018

PREPARED FOR:



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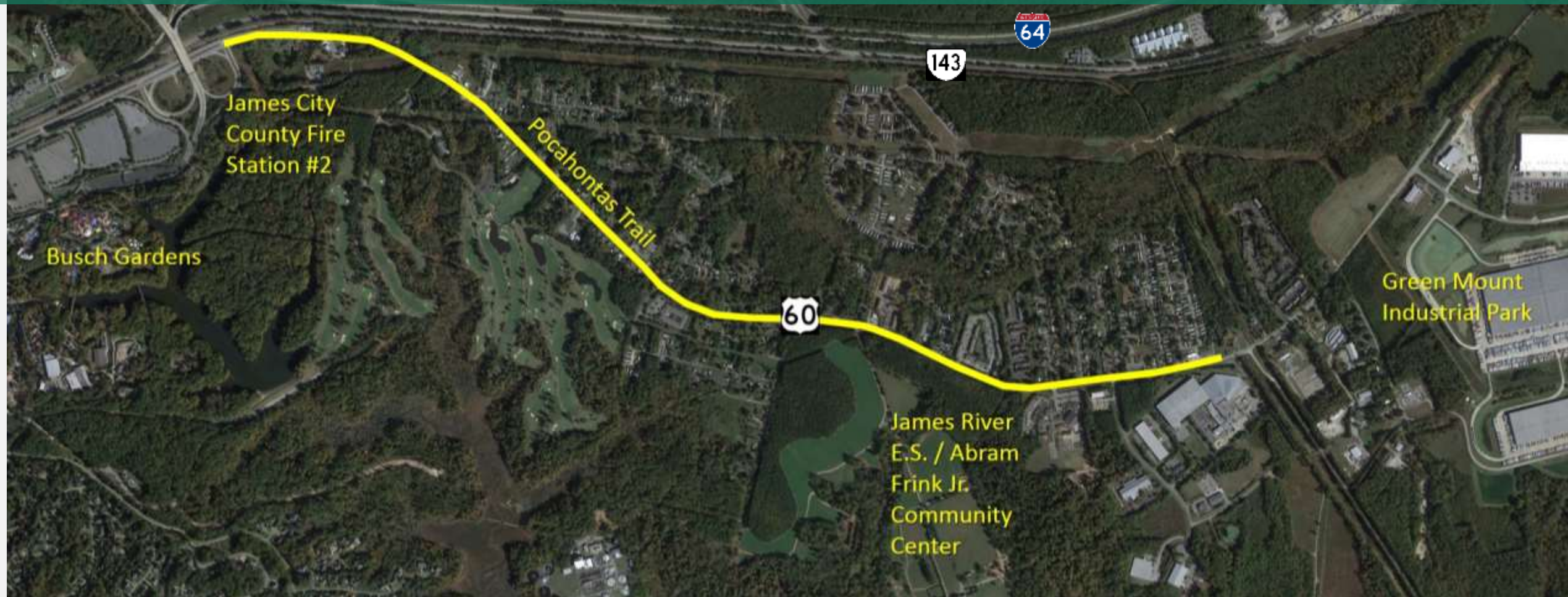
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Williamsburg Residency

Steering Committee



Study Corridor

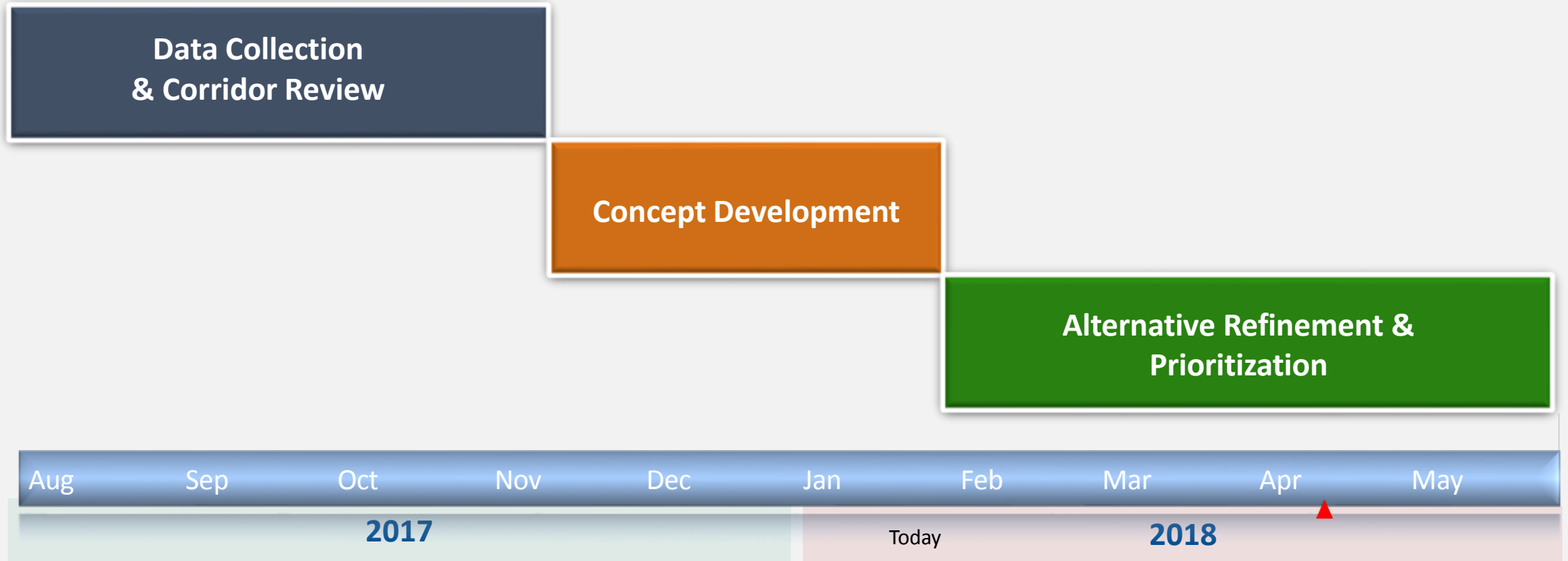


Study Scope

*Re-assess the Pocahontas Trail corridor and engage the community to identify key transportation needs and define a vision for the future of the corridor. **Identify feasible**, context sensitive multi-modal transportation **improvements** to address the community's needs and enhance quality of life for area residents and users of the corridor. **Develop concepts**, including cost estimates, to **implement** the desired improvements **and** recommend strategies to **prioritize improvements** along the corridor.*

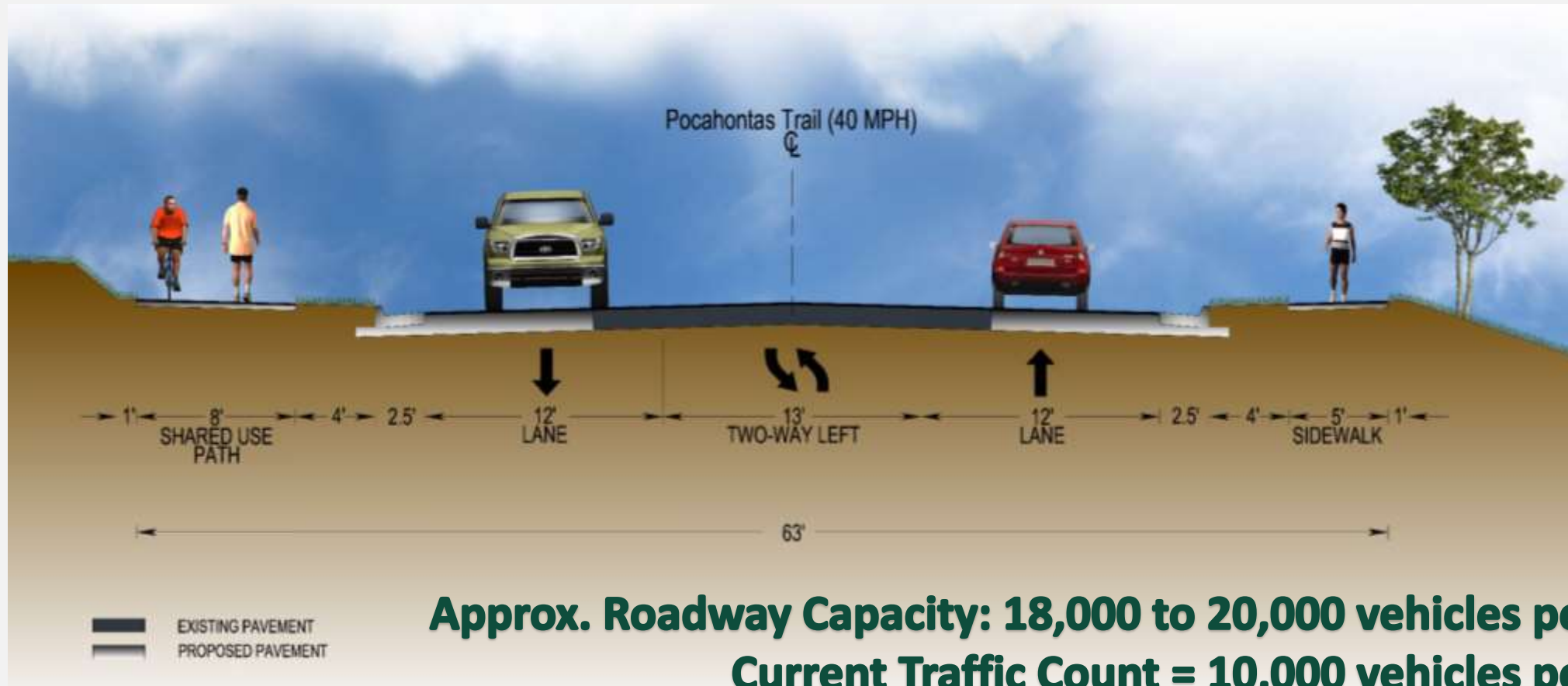


Study Schedule



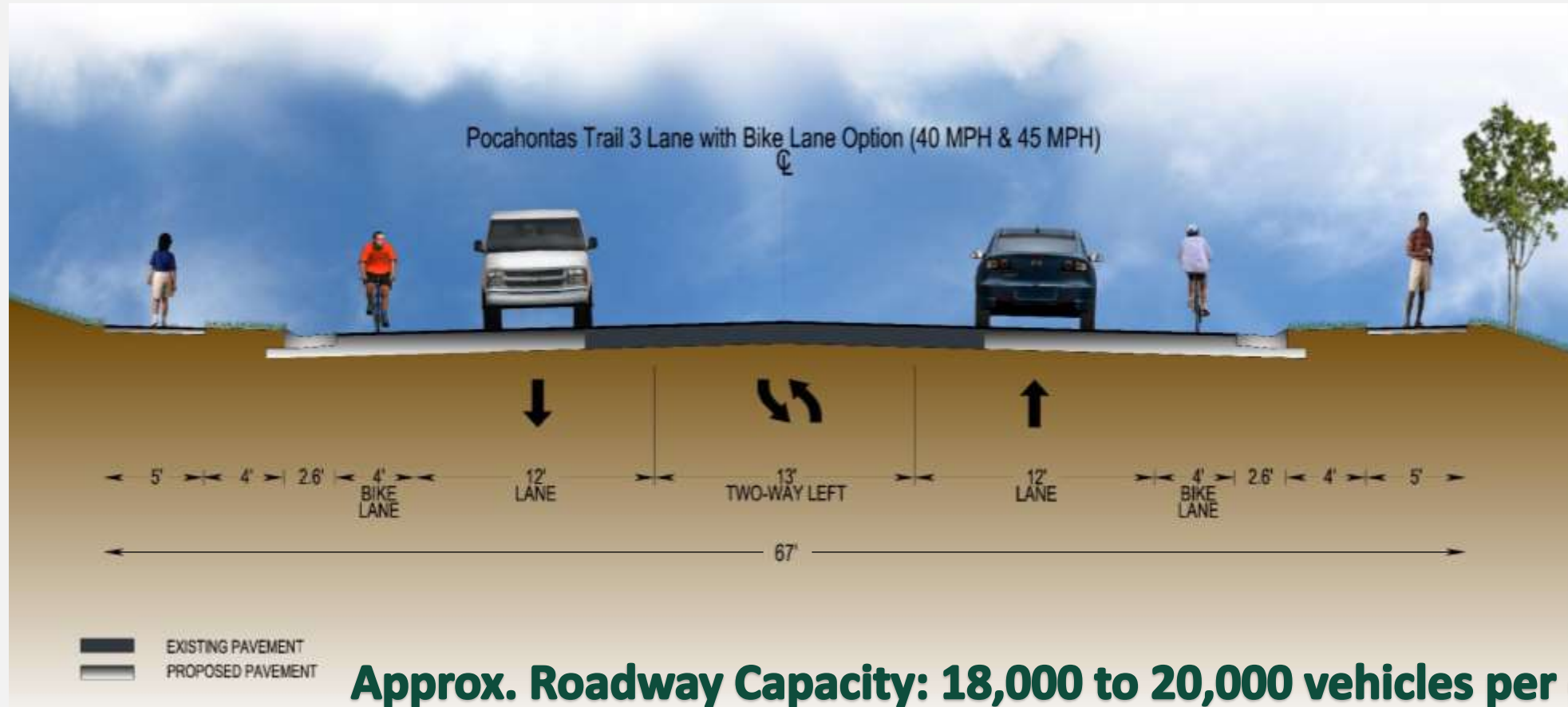
Anticipated Completion of Study: May 2018

3-Lane with Shared Use Path Conceptual Typical Sections



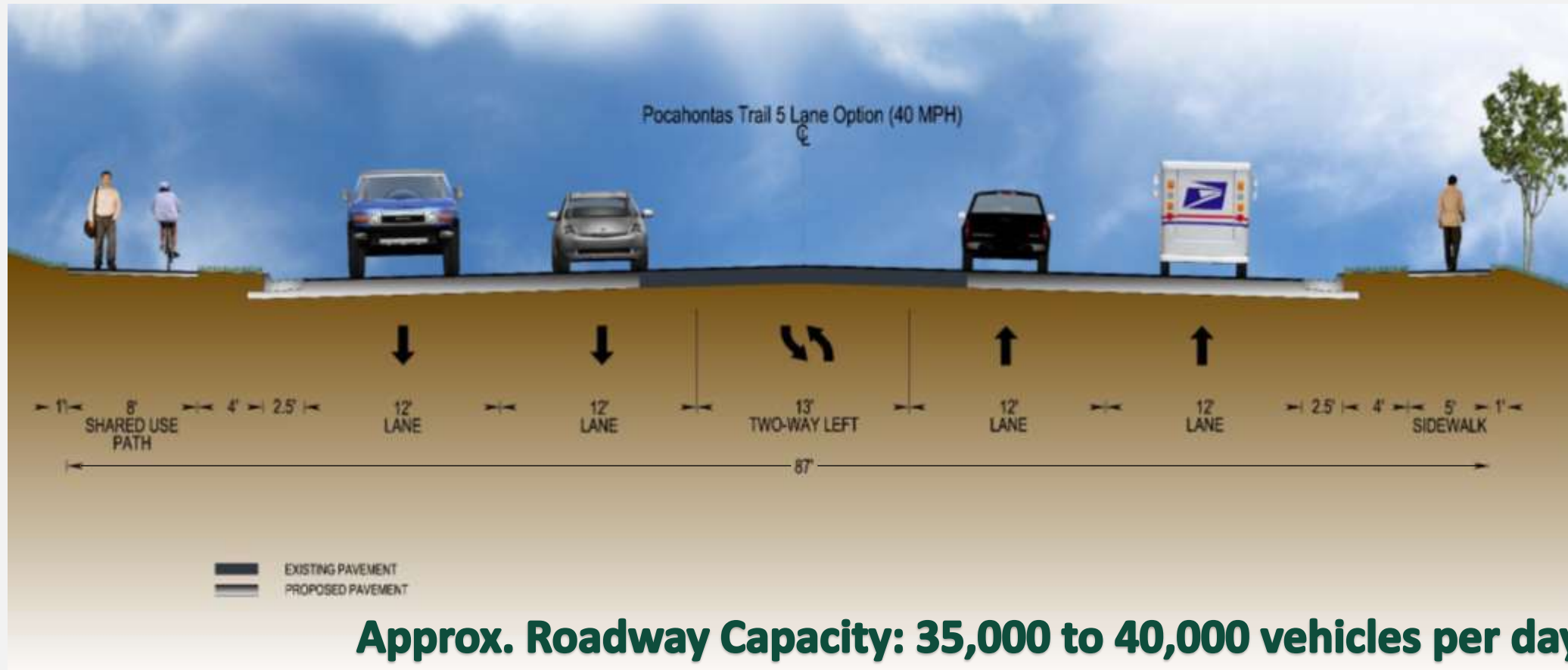
Approx. Roadway Capacity: 18,000 to 20,000 vehicles per day
Current Traffic Count = 10,000 vehicles per day

3-Lane with Bike Lanes Conceptual Typical Section



Approx. Roadway Capacity: 18,000 to 20,000 vehicles per day
Current Traffic Count = 10,000 vehicles per day

5-Lane with Shared Use Path Conceptual Typical Section



Approx. Roadway Capacity: 35,000 to 40,000 vehicles per day
Current Traffic Counts = 10,000 vehicles per day

PRELIMINARY COST ESTIMATES & PHASING



Preliminary Cost Estimates – Preliminary Engineering

- Engineering & Permitting Costs
 - For detailed design and securing required environmental approvals and permits
 - Estimates assume 20% of Construction Costs (including contingency for unknown details) – consistent with cost estimate approach used on recent Smart Scale projects for Hampton Roads District
- PE & Permitting Costs Range from \$3 - \$5M for Options 1, 2 and 3



Preliminary Cost Estimates – Right-of-Way

- Right-of-Way Cost Estimates
 - Based on VDOT provided survey and concept layout
 - Included assumptions for utility easements and temporary construction easements
- Number of potentially impacted parcels range from 82 to 110



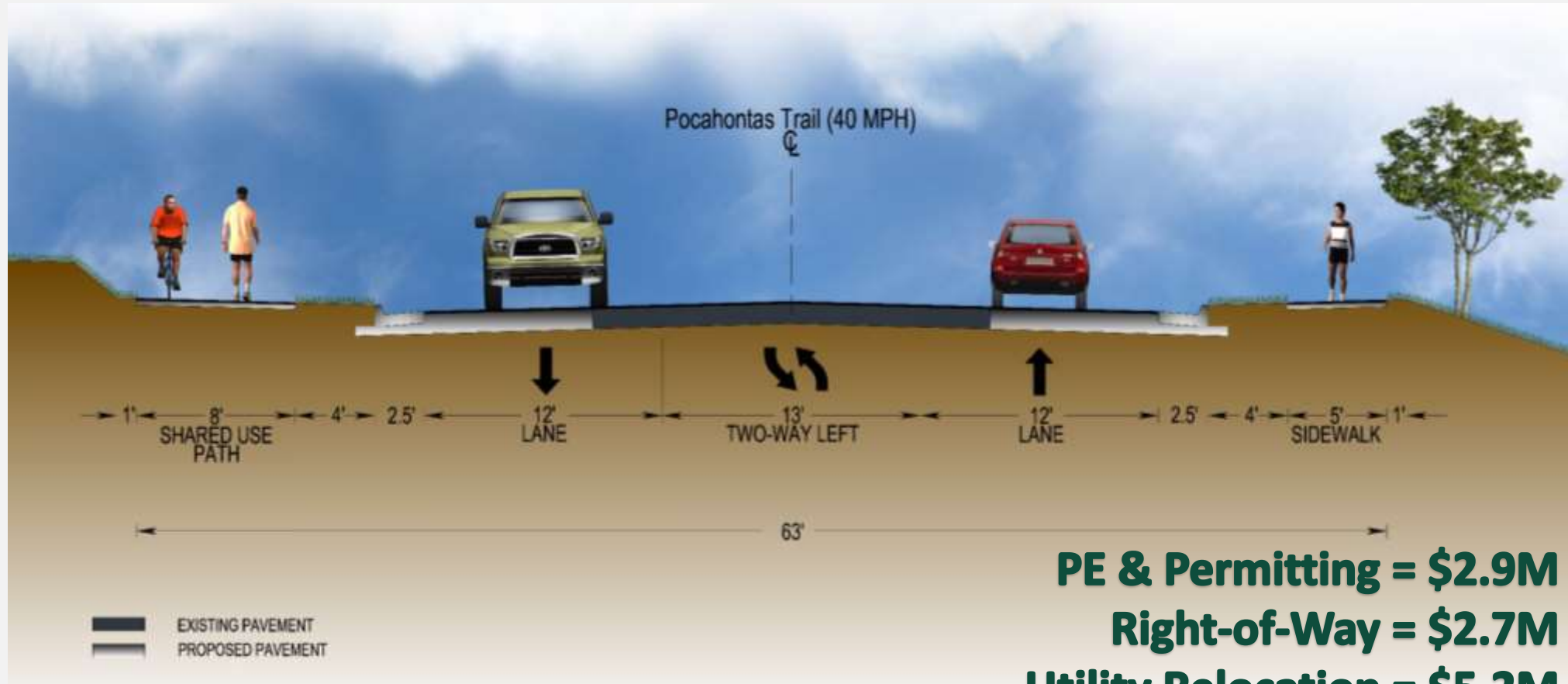
Preliminary Cost Estimates - Utilities

- Utility Relocations (Public and Private Owners)
 - Developed costs for relocating overhead Power and Communications for two options: Overhead and Undergrounding
 - Evaluated potential conflicts with water, sanitary sewer, gas, petroleum pipeline and underground communications / fiber and developed cost assumptions for relocations
- Public Utilities (Water / Sewer): Approximately \$3.5 - \$4M
- Private Utility Relocations: Approximately \$5 - \$6M

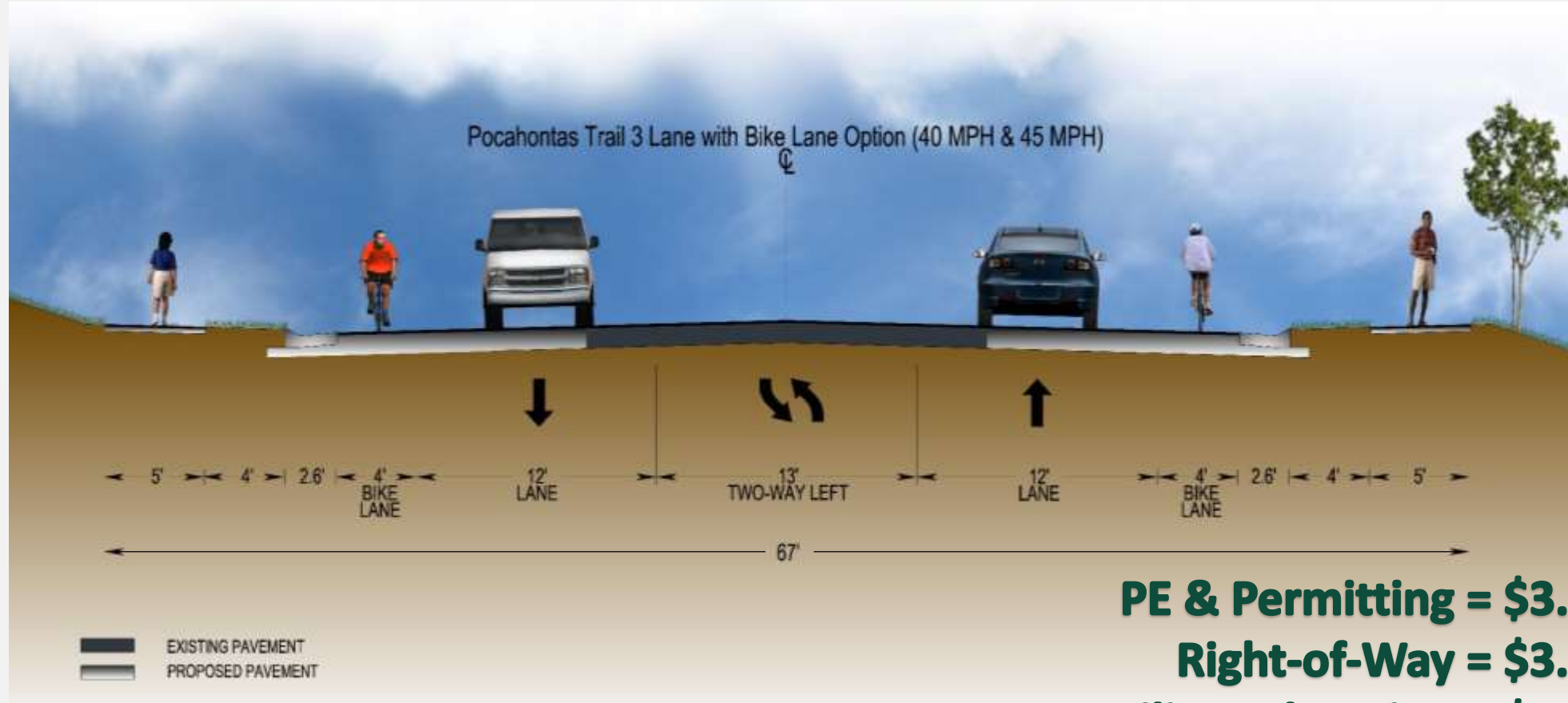
Preliminary Cost Estimates - Construction

- Estimated preliminary construction costs based on conceptual layouts
 - Quantities for major items (new pavement, curb and gutter, sidewalk)
 - Other items (drainage, grading, etc) estimated as percentage of cost of major items
 - Includes public utility relocations (water & sewer)
 - Includes a 30% contingency (accounts for unknown details)
 - Includes costs for Construction Engineering and Inspection (20% of CN) – oversight during the construction of the project
- Construction Costs (including Contingency) range from \$11 - \$17M for Options 1, 2 and 3 (full replacement of existing pavement would add \$3-4M)
- CEI Ranges from \$2.2 - \$3.3M

Option 1: 3-Lane with Shared Use Path



Option 2: 3-Lane with Bike Lanes



PE & Permitting = \$3.3M

Right-of-Way = \$3.3M

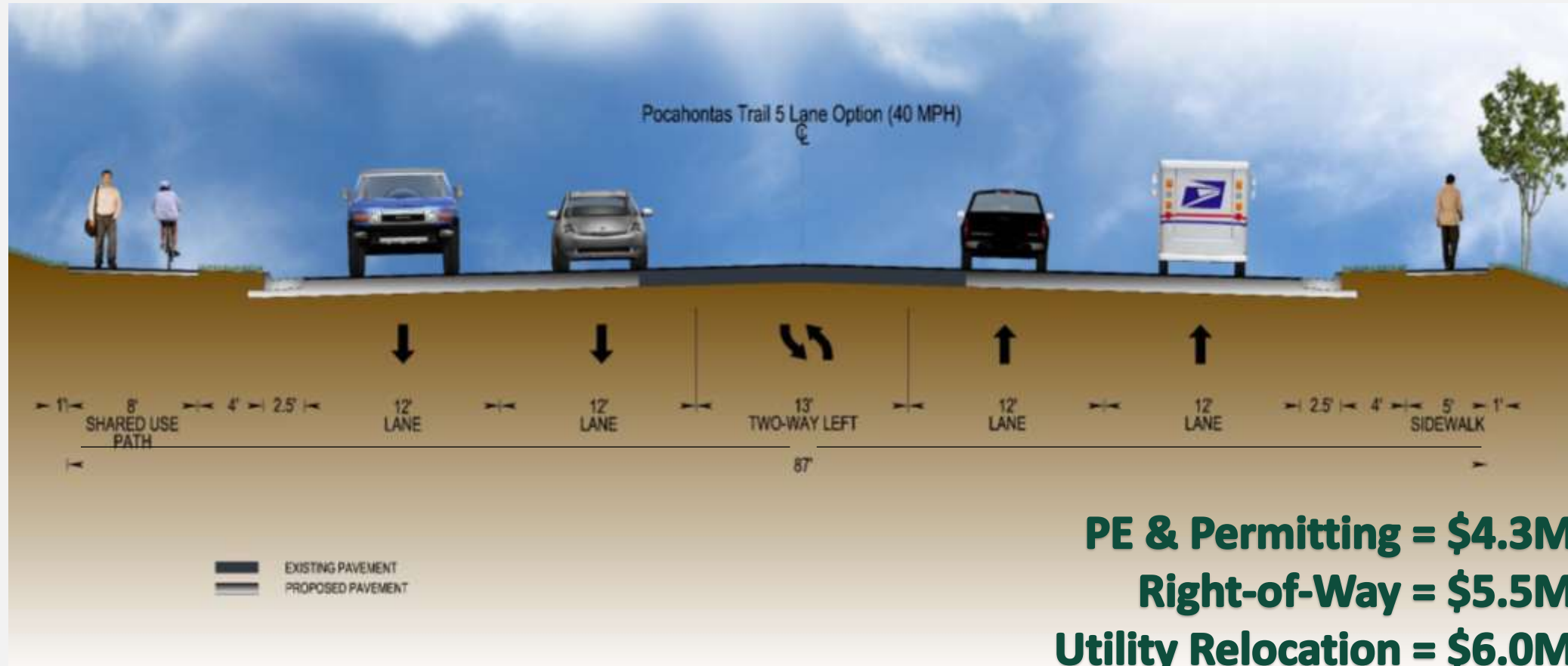
Utility Relocation = \$5.5M

Construction & CEI = \$18.9M

Total Cost = \$30.9M*

***Cost for complete project versus phased project**

Option 3: 5-Lane with Shared Use Path



PE & Permitting = \$4.3M

Right-of-Way = \$5.5M

Utility Relocation = \$6.0M

Construction & CEI = \$25.1M

Total Cost = \$41.0M*



***Cost for complete project versus phased project**

Funding Sources & Constraints

- Total Project Costs are high relative to available funding sources
 - Project did not achieve high benefit score in Smart Scale process
 - CMAQ & RSTP funds programmed by the TPO are limited
 - Revenue Sharing – Mix of local and state funds (maximum state match is \$10M)
- Approximately \$3M in CMAQ funding on the project currently
- James City County has funding proposed in the 5-year CIP for local share of funding



Proposed Project Phasing Approach

- Step 1: Identify Any Near-Term Projects to Implement Early
 - Ideally within existing right-of-way
 - Avoid future rework for the ultimate improvements

Examples:

- Bus Pull-off & Shelter Near Grove Christian Outreach
- Bus Pull-off & Shelter Near Howard Drive
- Access Management Improvements at 7-11 / Wisteria Gardens Lane

Proposed Project Phasing Approach

- Step 2: Based on anticipated costs, suggest dividing corridor into smaller segments to better match potential funding sources
 - Consider Safety & Operational Needs
 - Consider Logical Termini & Independent Utility
 - Consider Stormwater Management
 - Consider Environmental Impacts (Cultural & Natural Resources)
 - Consider Utility Impacts and Relocation Strategies (particularly for undergrounding)

Segments Evaluated

- Segment A: Western Limits to Howard Dr – 0.43 miles
- Segment B: Howard Dr to Jackson St – 0.44 miles
- Segment C: Jackson St to Magruder Dr – 0.16 miles
- Segment D: Magruder Dr to Ron Springs Dr – 0.30 miles
- Segment E: Ron Springs Dr to Plantation Dr – 0.63 miles
 - Segment E1: Ron Springs Dr to 7-11 – 0.21 miles
 - Segment E2: 7-11 to Plantation Dr – 0.42 miles

Phasing Segments – Key Points

- Segment A: Western Limits to Howard Dr
 - 3 lanes exist for over half the segment with relatively few access points
 - Low pedestrian activity - No existing sidewalk but 2 transit stops
 - Cultural Resources: Battle of Williamsburg
 - Natural Resources: Maybee's Salamander Habitat, Grove Creek Conservation Site
 - Utilities: Primarily Power, Communications and Water
 - Potential near-term project site for transit stop / shelter improvements
 - Potential Cost Savings – Defer sidewalk on south side, end shared use path at Howard Drive

Phasing Segments – Key Points

- Segment B: Howard Dr to Jackson St
 - Primarily 2-lane segment with more frequent access points
 - Low-moderate pedestrian activity
 - Sidewalk on north side and 2 transit stops
 - Cultural Resources: Battle of Williamsburg
 - Natural Resources: Grove Creek Conservation Site
 - Utilities: Power, Communications, Gas, Water & Sewer

Phasing Segments – Key Points

- Segment C: Jackson St to Magruder Dr
 - 3-lane segment with frequent access points
 - Low-moderate pedestrian activity
 - Sidewalk on north side and 2 transit stops
 - Natural Resources: Grove Creek Conservation Site
 - Utilities: Power, Communications, Gas, Water & Sewer
- Could be combined with Phase B or Phase D, depending on funding availability

Phasing Segments – Key Points

- Segment D: Magruder Dr to Ron Springs Dr
 - 2-lane segment with frequent access points
 - No existing pedestrian facilities
 - Low-moderate pedestrian activity (2 pedestrian crashes)
 - Deep ditches and drainage concerns
 - Natural Resources: Grove Creek Conservation Site
 - Utilities: Power, Communications, Gas, Water & Sewer

Phasing Segments – Key Points

- Segment E: Ron Springs Dr to Eastern Limits
 - Primarily 3-lane segment with frequent access points
 - Moderate pedestrian activity
 - Sidewalk along north side and 4 transit stops
 - Cultural Resources: Carters Grove Plantation
 - Utilities: Power, Communications, Gas, Water & Sewer, Petroleum Pipeline
 - Potential Near-Term Projects: Bus stop and shelter improvements, access management
 - Potential Cost Savings – Defer sidewalk on south side

Phasing Segments – Key Points

- Segment E1: Ron Springs Dr to 7-11
 - Primarily 3-lane segment with frequent access points
 - Moderate pedestrian activity
 - Sidewalk along north side and 2 transit stops
 - Crash hotspot at 7-11 / Wisteria Gardens Lane
 - Cultural Resources: Carters Grove Plantation
 - Utilities: Power, Communications, Gas, Water & Sewer, Petroleum Pipeline
 - Potential Near-Term Projects: Access management at 7-11
 - Potential Cost Savings – Defer sidewalk on south side

Phasing Segments – Key Points

- Segment E2: 7-11 to Planation Drive
 - Primarily 3-lane segment with frequent access points
 - Moderate pedestrian activity
 - Sidewalk along north side and 2 transit stops
 - Cultural Resources: Carters Grove Plantation
 - Utilities: Power, Communications, Gas, Water & Sewer, Petroleum Pipeline
 - Potential Near-Term Projects: Bus stop and shelter improvements
 - Potential Cost Savings – Defer sidewalk on south side

Preliminary Project Costs by Segment

- Segment A: \$5.0M
 - Segment B: \$7.6M
 - Segment C: \$2.4M
 - Segment D: \$5.3M
 - Segment E: \$8.2M** (E1 = \$2.7M, E2 = \$6.1M)
- For Future Planning Purposes:
Potential Future Eastern Extension
(Plantation Dr to BASF Dr): \$6 – 8M

Total: \$28.5M*

***Cost for phased project versus complete project**

****Cost for completing Segment E as one project versus breaking into smaller segments**



Corridor Prioritization Feedback

- Common Themes:
 - Complete pedestrian connections
 - Address safety concerns
 - Provide congestion relief
 - Improve emergency response
 - Improve transit stops / shelters
 - Specific Locations:
 - Grove Heights (including Colonial Manor)
 - Creative Kids Daycare Area



Corridor Prioritization – Segment Evaluation

Segment	Pedestrian Needs	Roadway Widening Needs	Traffic Safety Needs	Roadside Needs (Drainage/Vegetation)	Transit Needs
A	Low	Low-Medium	Medium	Low	Low
B	Low-Medium	Medium-High	Medium	Medium	Medium
C	Low-Medium	Low	Medium	Medium	Medium
D	High	High	Medium-High	High	Medium
E	Medium	Low-Medium	High	Low	Medium-High

Low: Fewer needs, less severe issues; Medium: Some needs, severity increases; High: Many needs, issues are most severe

Prioritization Scenario #1

- Addresses highest need segment first
 - Projects in desired cost range
1. Near-Term Improvements (1-2 transit stops, access management)
 2. Segments C & D (Jackson St to Ron Springs Dr): \$7.7M
 3. Segment B (Howard Dr to Jackson St): \$7.6M
 4. Segment E (Ron Springs Dr to Plantation Dr): \$8.0M
 5. Segment A (Western Limits to Howard Dr): \$5.0M



Prioritization Scenario #2

- Includes 7-11 / Wisteria Gardens area with Grove Heights
- Higher cost projects for phases 1 and 2

1. Near-Term Improvements (1-2 transit stops, access management)
2. Segments D & E1 (Magruder Dr to 7-11): \$8.0M
3. Segments B & C (Howard Dr to Magruder Dr): \$10.0M
4. Segment E2 (7-11 to Plantation Dr): \$6.1M
5. Segment A (Western Limits to Howard Dr): \$5.0M

Preliminary Prioritization Recommendation

Scenario #1:

1. Near-Term Improvements (1-2 transit stops, access management)
 2. Segments C & D (Jackson St to Ron Springs Dr): \$7.7M
 3. Segment B (Howard Dr to Jackson St): \$7.6M
 4. Segment E (Ron Springs Dr to Plantation Dr): \$8.0M
 5. Segment A (Western Limits to Howard Dr): \$5.0M
- Addresses highest need segment first with projects in desired cost range (\$5-\$8M)

Public Workshop #3 – April 25, 2018

6:30 – 8:00 PM – Mt. Gilead Church



YOU SPOKE. WE LISTENED.

Come see how your ideas have been incorporated into the concepts for the Corridor and give us feedback on how best to phase the improvements. Help us work towards improving transportation for all users along Pocahontas Trail at this final workshop.

Wednesday, April 25, 2018, 6:30 - 8 p.m.

Mount Gilead Church

8660 Pocahontas Trail | Williamsburg, VA 23185

**Light refreshments will be served*

www.jamescitycountyva.gov/PocTrailStudy

Questions or comments?

Email planning@jamescitycountyva.gov or call 757-253-6685



Outreach:

- Flyers
- Door Hangers
- Website Email Updates
- WATA Bus Posters & Brochures

Activities:

- Review Concept Refinements
 - Maps, Videos & Renderings
- Review Cost Estimates
- Present Phasing Recommendations
- Community Feedback on Phasing Plan





- Public Workshop Mtg. #3 – April 25, 2018
- Steering Committee Regroup – Early May 2018
- Present Findings and Recommendations to Planning Commission and Board and Supervisors – May & June 2018